



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
SCIENCE

DOE/SC CD-2/3 Review
of the
LHC CMS Detector Upgrade Project
Fermi National Accelerator Laboratory
August 5-7, 2014

Kurt Fisher
Committee Chair
Office of Science, U.S. Department of Energy
<http://www.science.doe.gov/opa/>



DOE EXECUTIVE SESSION AGENDA

Tuesday, August 5, 2014–Wilson Hall, in the Comitium

- 8:00 a.m. DOE Executive Session..... K. Fisher
- 8:05 a.m. Program Perspective..... M. Procario/T. Lavine
- 8:10 a.m. Federal Project Director Perspective..... P. Carolan
- 8:15 a.m. Questions

Project and review information is available at:

<http://www.fnal.gov/directorate/OPMO/Projects/USCMS/DOERev/20140805/review.html>



Review Committee Participants

Kurt Fisher, DOE/SC, Chairperson

SC1

HCal—Hadron Calorimeter (WBS 1.2)

- * Jim Proudfoot, ANL
- Jim Pilcher, U of Chicago

SC2

Forward Pixel Detector (WBS 1.3)

- * Jim Brau, Oregon
- Marina Artuso, Syracuse
- Maurice Garcia-Sciveres, LBNL

SC3

Level 1 Trigger (WBS 1.4)

- * Charlie Young, SLAC
- Kevin Pitts, U of Illinois
- Bill Ashmanskas, U of Penn

SC4

Cost and Schedule

- * Frank Gines, DOE/ASO
- Penka Novakova, BNL
- Gail Penny, DOE/BHSO

SC5

Project Management (WBS 1.1)

- * Michael Levi, LBNL
- Mark Palmer, FNAL
- Rob Roser, FNAL

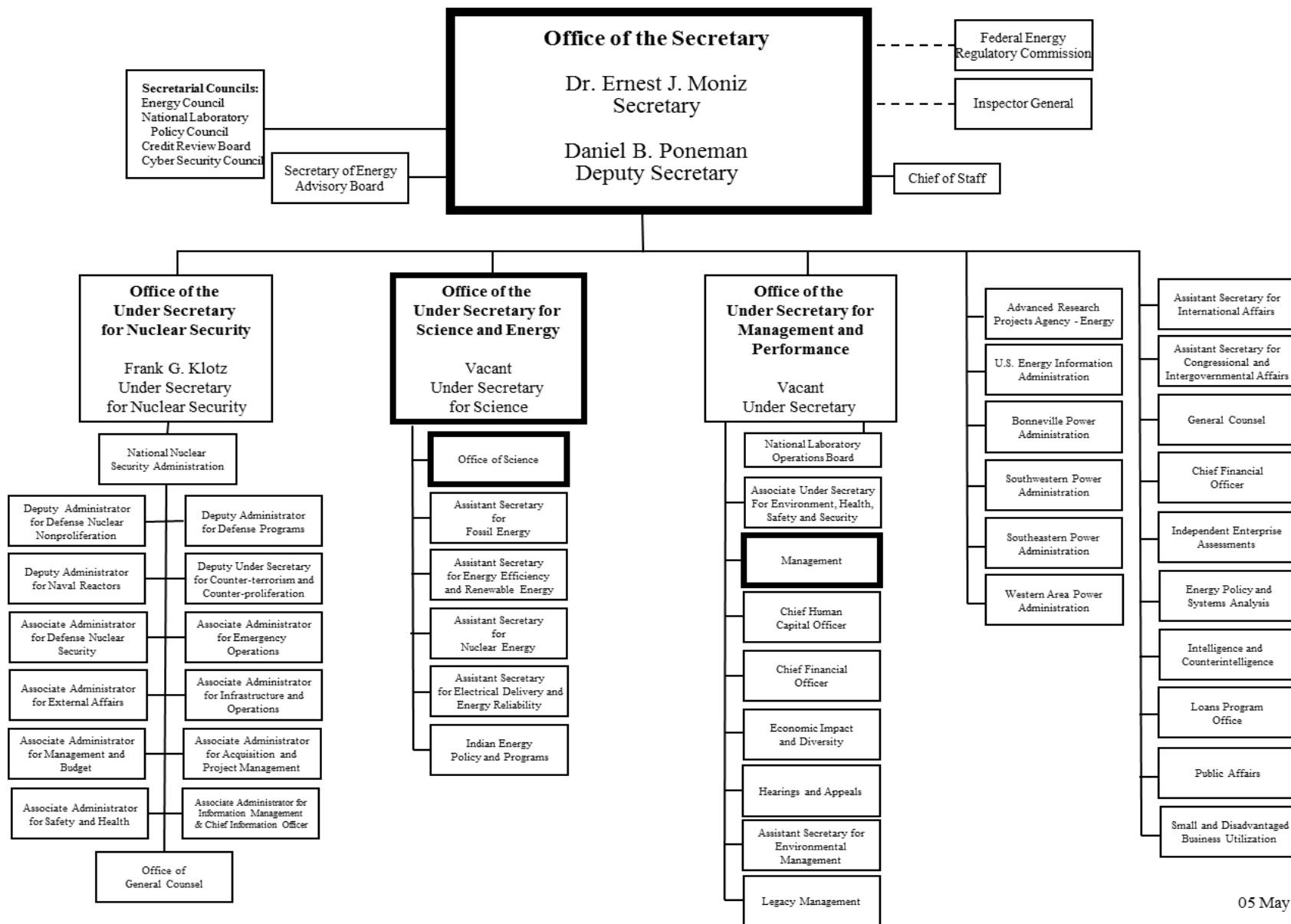
Observers

Jim Siegrist, DOE/SC
Mike Procario, DOE/SC
Simona Rolli, DOE/SC
Pepin Carolan, DOE/FSO

LEGEND

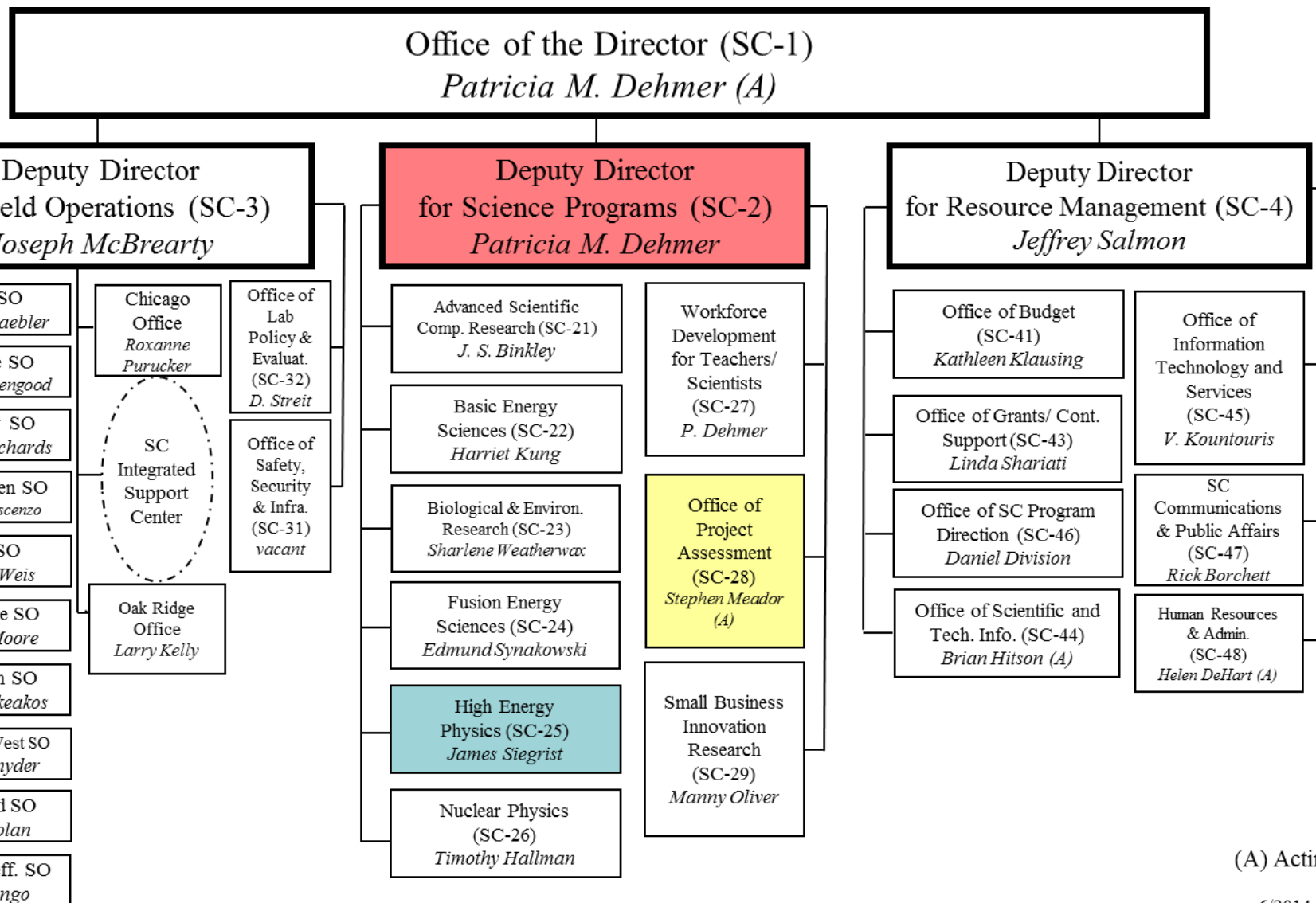
SC Subcommittee
* Chairperson

Count: 15 (excluding observers)





SC Organization



(A) Acting



1. Do the proposed technical design and associated implementation approach satisfy the performance requirements? Are the CD-4 goals well defined?
2. Performance Baseline: Is the cost estimate and schedule consistent with the plan to deliver the technical scope with the stated performance? Is the contingency adequate for the risk?
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4. Are the management structure and resources adequate to deliver the proposed final design within the baselines as identified in the PEP?
5. Is the documentation required by DOE Order 413.3B for CD-2 and CD-3 complete?
6. Are ES&H aspects being properly addressed given the project's current stage of development?



Tuesday, August 5, 2014—Wilson Hall, in the Comitium

8:00 am	DOE Executive Session	K. Fisher
9:00 am	Welcome	TBD
9:10 am	Project Overview and Conceptual Design (WBS 1.1)	TBD
10:00 am	Break	
10:20 am	HCAL Project (WBS 1.2)	TBD
11:00 am	Pixel Project (WBS 1.3)	TBD
11:40 am	Trigger Project (WBS 1.4)	TBD
12:20 pm	Lunch	
1:00 pm	Subcommittee Breakout Sessions	
	—Management	
	—HCAL	
	—Pixel	
	—Trigger	
3:30 pm	Break	
4:00 pm	Subcommittee Executive Session	
5:00 pm	DOE Full Committee Executive Session	K. Fisher
6:30 pm	Adjourn	



Wednesday, August 6, 2014

8:00 am	Subcommittee Breakout Sessions	
10:15 am	Drill Downs and CAM Interviews	
12:15 pm	Lunch	
1:00 pm	Drill Downs and CAM Interviews (cont'd)	
2:00 pm	Response to Questions	
3:30 pm	Subcommittee Executive Session/Report Writing	
4:30 pm	DOE Full Committee Executive Session.....	K. Fisher
6:00 pm	Adjourn	

Thursday, August 7, 2014

8:00 am	Committee Report Writing	
10:30 am	DOE Full Committee Executive Session Dry Run.....	K. Fisher
12:30 pm	Lunch	
1:30 pm	Closeout Presentation	
2:30 pm	Adjourn	



Report Outline/Writing Assignments

Executive Summary	Fisher*
1. Introduction.....	Rolli*
2. Technical Status (Charge Questions 1, 2, 3, 5)	
2.1 Hadron Calorimeter (WBS 1.2)	Proudfoot*/SC 1
2.1.1 Findings	
2.1.2 Comments	
2.1.3 Recommendations	
2.2 Forward Pixel Detector (WBS 1.3).....	Brau*/SC 2
2.3 Level 1 Trigger (WBS 1.4)	Young*/SC 3
3. Cost and Schedule (Charge Questions 2, 3, 5).....	Gines*/SC 4
4. Project Management (Charge Question 2, 3, 4, 5, 6).....	Levi*/SC 5

*Lead
SC Subcommittee



Closeout Presentation and Final Report Procedures



(Use PowerPoint / No Smaller than 18 pt Font)

2.1 Use Section Number/Title corresponding to writing assignment list.

List Review Subcommittee Members

List Assigned Charge Questions and Review Committee Answers

2.1.1 Findings – What the project told us

- In bullet form, include your account of factual technical, cost, schedule, and management. Information provided/presented by the Project

2.1.2 Comments – What we think about what the project told us

- In bullet form, include your assessment of project status (observations, concerns, feedback, suggestions, etc.) based on the findings. This section carries more emphasis than the Findings, but does not require an action as do the Recommendations. Do not number your comments.

2.1.3 Recommendations – What we think the project needs to do

- 1. Beginning with an action verb, provide a brief, concise, and clear statement with a due date.**
- 2.**



Format: Final Report

(Use MS Word / 12pt Font)

2.1 Use Section Number/Title corresponding to writing assignment list.

2.1.1 Findings – What the project told us

Include a brief narrative description of technical, cost, schedule, and management information provided by the project. Each subcommittee will emphasize their area of responsibility.

2.1.2 Comments – What we think about what the project told us

Descriptive material assessing the findings and making observations and conclusions based on the findings. **In addition, the committee's answer to the charge questions should be contained within the text of the Comments Section.** Do not number your comments.

2.1.3 Recommendations – What we think the project needs to do

- 1. Beginning with an action verb, provide a brief, concise, and clear statement with a due date.**
- 2.**
- 3.**

Please Note: Recommendations are approved by the full committee and presented at the review closeout briefing. Recommendations SHOULD NOT be changed or altered from the closeout report to the Final Report.



- **Present closeout reports in PowerPoint.**
- **Forward your sections for each review report (in MSWord format) to Casey Clark, casey.clark@science.doe.gov, by Monday, August 11, 8:00 a.m. (EDT).**



Closeout Report on the DOE/SC CD-2/3 Review of the LHC CMS Detector Upgrade Project Fermi National Accelerator Laboratory August 5-7, 2014

**Kurt Fisher
Committee Chair
Office of Science, U.S. Department of Energy**

<http://www.science.doe.gov/opa/>



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- **Findings**
- **Comments**
- **Recommendations**



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- **Findings**
- **Comments**
- **Recommendations**



PROJECT STATUS		
Project Type	MIE / Line Item / Cooperative Agreement	
CD-1	Planned:	Actual:
CD-2	Planned:	Actual:
CD-3	Planned:	Actual:
CD-4	Planned:	Actual:
TPC Percent Complete	Planned: _____ %	Actual: _____ %
TPC Cost to Date		
TPC Committed to Date		
TPC		
TEC		
Contingency Cost (w/Mgmt Reserve)	\$	_____ % to go
Contingency Schedule on CD-4b	_____ months	_____ %
CPI Cumulative		
SPI Cumulative		



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